

## AQS Enhanced Precision Reports - Software Release Notes for December 12, 2011

AQS Users who load and retrieve precision data may have noticed some recent changes.

AQS no longer generates the precision data transactions when a user loads raw data; instead, precision data for collocated monitors will be created on demand as needed for a report.

- 255 Data Quality Indicator Report, 246 Precision Report, and 250 P/A Raw Data Report – precision data is generated via a custom database view
- 502 Extract P/A Data– only shows precision data from user loaded RP data

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### 1. AQS is no longer generating precision data transactions during the load process.

Previous practice was that users loading raw data (RD) transactions automatically had the corresponding precision data (RP) transactions inserted. The POST process was actually generating these records and inserting those records into the PRECISION\_DATA table, but this often encountered errors and caused the POST process to fail.

### 2. Precision data will be created on demand as needed.

Beginning In July 2011, precision data is created “on-the-fly” for collocated monitors as needed for a report. A custom database view automatically generates the precision data, and the view looks at both collocated precision data generated from RD transactions and precision data generated from RP transactions. As before, precision data can still be loaded by a user via the RP transactions.

### 3. Precision data is automatically generated for collocated monitors.

In order to have AQS automatically generate precision data, you must create a Monitor Collocation record (Maintain Monitor → Collocation tab) which defines the collocated pair. Once this is done, AQS will automatically generate the precision data for these collocated monitors using the submitted raw data for the same date-time and precision id.

The primary monitor of the collocated pair is labeled:

Maintain - Monitors (Read Only. Update/Insert Not Allowed.)

Monitor Basic Sample P... Type ... Agenc... Objec... Pollu... Req F... Tange... Probe... Reg C... Colloc...

Collocation

Monitor 37-099-0006-88101-1

Begin Date End Date Distance from Primary Sampler Primary Sampler? Monitor Id

20000401 Y

The secondary monitor of the collocated pair is labeled:

Maintain - Monitors (Read Only. Update/Insert Not Allowed.)

Monitor Basic Sample P... Type ... Agenc... Objec... Pollu... Req F... Tange... Probe... Reg C... Colloc...

Collocation

Monitor 37-099-0006-88101-2

Begin Date End Date Distance from Primary Sampler Primary Sampler? Monitor Id

20000401 3.14 N 37-099-0006-88101-1

The distance from the primary sampler is in meters.

4. **The changes affect the following AQS reports: the 255 Data Quality Indicator Report, the 246 Precision Report and the 250 P/A Raw Data Report**

Again, whenever one of these reports is run, the custom database view automatically generates the precision data to populate the report. The new precision data view looks at both collocated precision data generated from RD transactions and precision data generated from RP transactions.

Beginning on December 1, 2011, both user-submitted precision data and all automatically generated precision data are available in these AQS precision data reports: 255 Data Quality Indicator Report, 246 Precision Report, and 250 P/A Raw Data Report.

**255 Data Quality Indicator Report** – Since July 2011, this report already includes both submitted precision data and automatically-generated precision data. The 255 does not break data out into generated vs non-generated precision data, but uses both in its calculations without making a distinction.

### Collocation Summary

Pollutant: PM2.5		PQAO: Eastern Band Of Cherokee Indians Of North Carolina										App A?: Yes	
Year	Method	Region	State	# Sites	# Collocated Required	# Actually Collocated	% Req. Sites Collocated	# Req	# Obs	# Valid Obs	% Complete	CV	
2010	118	04	NC	1	1	1	100	30	47	47	100	7.06	
2010	SUMMARY	04	NC				100			47	100	7.06	
SUMMARY		04	NC				100			47	100	7.06	

For the 255 report, the “# Collocation Required” and the “# Actually Collocated” show compliance with Appendix A requirements for the number of collocated monitors in the network. This report already used the collocated precision view. The “# Actually Collocated” would reflect collocated monitors, set up as described earlier under 3.

**246 Precision Report** - displays precision data submitted using the RP (Precision Data) transaction and the automatically generated precision data; the report has a column labeled “GENERATED” that will distinguish these: submitted precision data would have “GENERATED” = “N” and the automatically generated precision data would have “GENERATED” = “Y”

COLLOCATED PRECISION CHECKS												
PARAMETER	STATE	PQAO	MONITOR ID	DATE	PREC ID	PRIMARY	METH CODE	DUPLICATE	METH CODE	UNIT	%DIFF	GENERATED
PM2.5 - Local Cor	NC	Eastern Band Of Cherokee In	37-099-0006-88101-1	2010/07/31		15.6	118	17.0	118	Micrograms/cubi	-8.6	Y

**250 P/A Raw Data Report** –shows all precision data with a “GENERATED” flag to indicate the source of the data; submitted precision data would have “GENERATED” = “N” and the automatically generated precision data would have “GENERATED” = “Y”

PRECISION DATA												
Duration: 24 HOUR	Actual Method: 118 R & P Model 2025 PM2.5 Sequential w/WINS\GRAVIMETRIC										Units:Micrograms/cubic meter	
Date	Prec ID	Actual	Indicated	Indicated Method								GENERATED
20070118		6.5	7.0	118 R & P Model 2025 PM2.5 Sequential w/WINS\GRAVIMETRIC								Y

5. **The 502 Extract P/A Data has not been modified.**

This report’s purpose is to extract data in RP transaction format from the precision data table (PRECISION\_DATA ), which is populated via the load of precision data (RP). This is the data that users have submitted through the RP (precision data) transactions. It is not appropriate to show the system-generated precision data.